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EXAMINER	
LEUNG, JENNIFER A	
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1764	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/417,918	SASAKI ET AL.	
	Examiner	Art Unit	
	Jennifer A. Leung	1764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7 and 10-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7 and 10-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☒ The proposed drawing correction filed on *31 October 2002* is: a)☒ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *6* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Amendment

1. The Amendment filed on October 31, 2002 has been received and carefully considered. The drawing and specification changes submitted on October 31, 2002 are acceptable. Claims 8-9 have been cancelled. Claims 21-22 have been added. Claims 1-7 and 10-22 remain active.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-22 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, it is unclear as to the structural limitation the applicants are attempting to recite by the phrase "adapted to..." (lines 7, 16), since it has been held that the recitation that an element is "adapted to" perform a function is not a positive limitation but only requires the ability to so perform and therefore does not constitute a limitation in any patentable sense. *In re Hutchison*, 69 USPQ 138. See also, claim 12 (line 9), claim 16 (line 7), claim 19 (lines 6, 8), and claim 20 (lines 5, 7). In addition, it is unclear as to the structural relationship of the "second independent gas flow path structure" (lines 6-14) to the other elements of the apparatus. Likewise, the relationship of the "first and second temperature adjusting fluid flow path structure" (lines 15-26) to the other elements of the apparatus, in particular the relationship to the "first and second independent gas flow path structures" (line 6).

In claim 2, "the gas absorption/releasing material" (line 3) lacks proper positive antecedent basis, as it is merely recited in the intended use clause in claim 1 (lines 6-14).

In claim 5, it is unclear as to the relationship between "the first zone" (line 4) and "the second zone" (line 6) to the first and second zones set forth in claim 1, since it appears that the two claims contradict. As recited in claim 1, in "the first zone... the specific gas is released" (lines 19-20), whereas in claim 5, "the mixed gas is fed... in the first zone" (lines 2-4). Likewise, as recited in claim 1, "the second zone... promotes absorption..." (lines 24-26), whereas in claim 5, "the specific gas is released... in the second zone" (lines 4-6).

In claim 10, the language of the claim is directed to a method limitation which renders the claim vague and indefinite as it is unclear as to what structural elements the applicants are attempting to recite by, "wherein the specific gas is carbon dioxide" (lines 1-2), since "the specific gas" is not an element of the apparatus. See also claims 14 and 17. Furthermore, "the gas absorption/releasing material" (line 2) lacks proper positive antecedent basis, as it is merely recited in the intended use clause in claim 1 (lines 6-14).

In claim 11, the language of the claim is directed to a method limitation which renders the claim vague and indefinite as it is unclear as to what structural elements the applicant(s) is/are attempting to recite since "the second temperature" (lines 1-2) and "the first temperature" (lines 3-4) are not considered elements of the apparatus. See also claims 15 and 18.

In claim 12, it is unclear as to the structural relationship of the "second independent gas flow path" (line 7) to the other elements of the apparatus. Likewise, the relationship of "a second temperature zone" (line 12) and "a temperature control fluid passage structure" (line 14) to the

other elements of the apparatus. Furthermore, it is unclear as to the relationship of "a mixed gas" (line 10) to "a mixed gas" set forth in line 5.

In claim 19, it is unclear as to the structural relationship of the "different temperature zone"(line 9) to the other elements of the apparatus. Likewise, the relationship of "the second gas flow path" (line 17) to the other elements of the apparatus.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-7, 12-13, 16 and 18-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Panzica et al. (U.S. 5,057,128).

With respect to claim 1, Panzica et al. (FIG. 1, 3) disclose a gas separator comprising an outer casing **36**; a rotating body (elements **14** mounted via means **12** and base member **16**) within casing **36**; and a drive means **59** (column 5, lines 17-20). In view of the newly added limitations, Panzica et al. further disclose first (FIG. 3, elements **14** on left side) and second (FIG. 3, elements **14** on right side) independent gas flow path structures, wherein the first gas flow path of the first gas flow path structure extends through the casing from a supply port **40** to a discharge port **45** and over a gas absorption/releasing material supported in the body (column 3, lines 19-29), and the second gas flow path structure having a recovery port structure **50** via which the specific gas is discharged. Panzica et al. (FIG. 2; column 4, lines 13-28) further disclose first **46b** and second **46a** temperature adjusting fluid flow path structures, wherein the first structure **46b** directs a first fluid through a first zone (for release) and the second structure

46a directs a second fluid through a second zone, the first gas flow path extending through the second zone (for absorption), i.e. upon rotation.

With respect to claim 2, Panzica et al. further disclose a plurality of fan-shaped hollow blocks **14** arranged circumferentially (FIG. 1, 2) having gas adsorption/releasing material disposed on at least one inner surface of the blocks (column 3, lines 19-29, 51-55).

With respect to claim 3, Panzica et al. further disclose a hollow static portion **26** which extends along the axis of rotation (FIG. 1, 2, 3).

With respect to claim 4, Panzica et al. further disclose the static portion **26** is divided into two sections **46b**, **46a** (FIG. 2) to form paths for the first and second temperature adjusting fluids (column 4, lines 13-28); a plurality of supply paths via **45**, **43** are formed between exterior surfaces of the blocks **14**; and sealing portions **51**, **57** are disposed between the static portion and rotating body and between the rotating body and casing (FIG. 4) for dividing the supply paths into a plurality of sections through which the first and second temperature adjusting fluids flow.

With respect to claim 5, Panzica et al. disclose a plurality of rotating positions (column 5, lines 17-20), wherein the mixed gas is fed to the material at a first rotating position (left elements **14** in FIG. 3), wherein the specific gas is released from the material at a second rotational position (right elements **14** in FIG. 3), and wherein blocking portions are located in the casing between the first and second rotational positions to block communication between the first and second rotational positions (FIG. 2, 5, column 4, lines 58-62).

With respect to claim 6, Panzica et al. further disclose the division of blocks **14** to form ones related to absorption and ones related to release (column 2, lines 24-35). In view of the newly added limitations, Panzica et al. further disclose the first and second temperature adjusting

fluid flow path structures **46b**, **46a** are divided by blocking portions (column 4, lines 57-62), and the number of blocks (FIG. 2, 3) in the second zone (absorption) is larger than the number of blocks in the first zone (release).

With respect to claim 7, Panzica et al. disclose a honeycomb-like member provided in the blocks (column 3, lines 51-55).

With respect to claim 12, Panzica et al. (FIG. 1, 3) disclose a gas separator comprising an outer casing **36**; a rotating body (elements **14** mounted via means **12** and base member **16**); and a drive means **59**. In view of the newly added limitations, Panzica et al. further disclose elements **14** comprise a gas absorption/releasing material (column 3, lines 19-29). Furthermore, the separator comprises first (via left elements **14**, FIG. 3) and second (via right elements **14**, FIG. 3) independent gas flow paths, the first flow path in a first temperature zone and extending between a supply port **40** and a discharge port **45**, which are located in axially opposite ends of the casing. Panzica et al. further disclose a temperature control fluid passage structure **46** for controlling the temperature of a second temperature zone (right elements **14**), and a recovery port **50**.

With respect to claim 13, Panzica et al. further disclose said body comprises a plurality of fan-shaped hollow blocks (FIG. 2; column 3, lines 19-29); a central hollow static portion **26** (FIG. 1, 2, 3); and supply paths (dashed arrows, via **46** and through right elements **14**, in FIG. 3) formed between the blocks **14** which comprise the temperature control fluid passage structure.

With respect to claim 16, Panzica et al. (FIG. 1, 3) disclose a gas separator comprising an outer casing **36**; a rotating body (elements **14** mounted via means **12** and base member **16**) within casing **36**; and a drive means **59** (column 5, lines 17-20). In view of the newly added limitations, Panzica et al. further disclose flow path means **46** within the casing for feeding a temperature

adjusting fluid for exclusively changing the temperature of a gas absorption/releasing material depending on a rotational position of the body, and for causing absorption and release of the specific gas in accordance with the rotational position of the body (column 4, lines 13-42).

With respect to claim 18, no further structural limitations are recited since temperature is not an element of the apparatus, and therefore the apparatus of Panzica et al. meets the claim.

With respect to claim 19, Panzica et al. (FIG. 1, 2, 3) disclose a gas separator comprising: an outer casing **36**; a rotating body (hollow fan shaped blocks **14** mounted via means **12** and base member **16**) within casing **36**; and a drive means **59** (column 5, lines 17-20). In view of the newly added limitations, Panzica et al. further disclose a gas absorption/releasing material (column 3, lines 19-29, 51-55) provided in the hollow portions of the blocks **14**; a hollow static portion **26** disposed at a central portion of the body and having an inner hollow portion **46** which is divided by a separation plate thereby to form two introducing path structures **46a**, **46b** through which temperature adjusting fluids pass (column 4, lines 13-42); and first (left blocks **14**, FIG. 3) and second (right blocks **14**, FIG. 3) independent gas flow path structures, the first gas flow path extending between a supply port **40** and a discharge port **45** and passing through the hollow portions of the blocks **14** of the body, the second gas flow path having a recovery port **50** through which the specific gas is released from the material and vented from the casing.

Since it is unclear as to the structural limitations the applicant is attempting to recite, it is best understood that instant claims 1-7, 12-13, 16 and 18-19 structurally read on the reference of Panzica et al.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 10-11, 14-15, 17 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Panzica et al. (U.S. 5,057,128) in view of Nakagawa et al. (JP 09-099214).

With respect to claims 10, 14 and 17, although Panzica et al. are silent as to the material comprising specifically a lithium based material, thereby forming a lithium carbonate, it would have been obvious design choice for one of ordinary skill in the art at the time the invention was made to use a lithium based material depending on the intended use (i.e. purifying gas streams comprising carbon dioxide) of the apparatus and absent showing any unexpected results, since the use of lithium based absorbents is known in the art for absorption of carbon dioxide, as evidenced by Nakagawa et al. Nakagawa et al. teach the use of a lithium based absorbent

(Li_2ZrO_3), which is preferable as a carbon dioxide absorbent due to its high reversibility reaction, making it suitable for repeated use (Sections [0022] - [0026]).

With respect to claims 11 and 15, no further structural limitations are recited since temperature is not an element of the apparatus, and therefore the apparatus of Panzica et al. meets the claims.

With respect to claim 20, Panzica et al. (FIG. 1, 2, 3) disclose a gas separator comprising: an outer casing **36**; a rotating body (blocks **14** mounted via means **12** and base member **16**) within casing **36**; and a drive means **59** to rotate the body in a predetermined direction (indication **56**; column 5, lines 17-20). In view of the newly added limitations, Panzica et al. further disclose a temperature responsive absorbent (column 3, lines 19-29; 41-55) provided on an inner surface of the body and a flow path means **46** formed inside the body for directing an essentially unrestricted flow of gas (dashed arrows) through the casing and for feeding a temperature adjusting fluid through a selected portion of the rotating body (i.e. right elements **14**, FIG. 3), said flow path means **46** being divided into a plurality of flow path sections by blocking portions (column 4, lines 57-62) to establish different temperature zones within the casing and to cause absorption and release of a specific gas depending on the rotational position. Although Panzica et al. do not specifically disclose the specific gas is carbon dioxide, or specifically a carbon dioxide absorption/releasing material, it would have been an obvious design choice for one of ordinary skill in the art at the time the invention was made to select a material capable of absorbing and releasing carbon dioxide, depending on the intended use of the apparatus and absent showing any unexpected results. In addition, the use of such materials is known in the art, as evidenced by Nakagawa et al. Nakagawa et al. teach the use of a lithium based absorbent

(Li_2ZrO_3), which is preferable as a carbon dioxide absorbent due to its high reversibility reaction, making it suitable for repeated use (Sections [0022] - [0026]).

5. Claims 1-3, 7, 10-19 and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang et al. (U.S. 3,446,031) in view of Panzica et al. (U.S. 5,057,128).

With respect to claim 1, Chang et al. disclose a gas separator (FIG. 1, 2) comprising a rotating body **10** and a drive means (inherent, as illustrated by directional arrows). Chang et al. further disclose first (left side of body) and second (right side of body) independent gas flow path structures, wherein the first gas flow path of the first gas flow path structure extends from a supply port (open top surface via which **A2** enters) to a discharge port (open bottom surface, via which **A3** exits) and over a gas absorption/releasing material supported in the rotating body (which may be provided on either vertical or horizontal passage surfaces, depending on intended use; column 3, lines 32-36; column 4, lines 42-45), and the second gas flow path structure having a recovery port structure (open bottom surface, via which **A7** exits). Chang et al. further disclose first and second temperature adjusting fluid flow path structures **22b** or **22a**, wherein the first temperature adjusting fluid flow path structure **22b** directs a first fluid through a first zone (right side of body **10**, FIG. 2) and the second temperature adjusting fluid flow path structure **22a** directs a second fluid through a second zone (left side of body **10**, FIG. 2), the first gas flow path extending through the second zone. Although Chang et al. are silent as to the body **10** being housed in an outer casing, it would have been obvious for one of ordinary skill in the art at the time the invention was made to provide a casing for the apparatus since the use of casings for housing rotary absorption apparatuses is conventionally known in the art, as evidenced by

Panzica et al. (casing walls **36** are provided in order to direct air into the absorbing elements; column 3, lines 56-61; FIG. 1).

With respect to claim 2, Chang et al. further disclose a plurality of fan-shaped hollow blocks (FIG. 1, 2) arranged circumferentially having gas adsorption/releasing material (column 3, lines 32-36; column 4, lines 42-35) disposed on at least one inner surface of the blocks.

With respect to claim 3, Chang et al. further disclose a hollow static portion (defined by inner wall **12**; FIG. 1, 2, 5) which extends along an axis of rotation.

With respect to claim 7, Chang et al. further disclose a honeycomb member provided in the blocks (FIG. 1, 2, 5; column 2, line 69-column 3, line 5).

With respect to claim 10, Chang et al. further disclose the material may comprise a lithium based material (column 3, lines 32-36). Although Chang et al. do not specifically state the specific gas comprises carbon dioxide, the apparatus of Chang et al. is capable of utilizing a mixed gas comprising carbon dioxide. In any event, the modified apparatus of Chang et al. meets the claim since the gas is merely intended use and therefore not an element of the apparatus.

With respect to claim 11, no further structural limitations are recited since temperature is not an element of the apparatus, and therefore the apparatus of Chang et al. meets the claim.

With respect to claim 12, Chang et al. disclose a gas separator (FIG. 1, 2) comprising a rotating body **10** and a drive means (inherent, as illustrated by directional arrows). Chang et al. further disclose the rotating body comprises a gas absorption/releasing material (column 3, lines 32-36; column 4, lines 42-35). Furthermore, the separator comprises first (left side of body, FIG. 2) and second (right side of body, FIG. 2) independent gas flow paths, the first flow path in a first temperature zone and extending between a supply port (top surface, via which **A2** enters)

and a discharge port (bottom surface, via which **A3** exits), which are located in axially opposite ends. Chang et al. further disclose a temperature control fluid passage structure **22b** for controlling the temperature of a second temperature zone (right side of body) through which the rotating body rotates, and a recovery port (bottom surface, via which **A7** exits) through which the specific gas absorbed is released and exhausted. Although Chang et al. are silent as to the body **10** being housed in an outer casing, it would have been obvious for one of ordinary skill in the art at the time the invention was made to provide a casing for the apparatus since the use of casings for housing rotary absorption apparatuses is conventionally known in the art, as evidenced by Panzica et al. (casing walls 36 are provided in order to direct air into the absorbing elements; column 3, lines 56-61; FIG. 1).

With respect to claim 13, Chang et al. (FIG. 1, 2, 5) further disclose said body **10** comprises a plurality of fan-shaped hollow blocks, and wherein the body has a central hollow static portion (defined by inner wall **12**) and supply paths (via **22a**, **22b** and horizontal sections **18**) formed between the blocks which comprises the temperature control fluid passage structure.

With respect to claim 14, Chang et al. further disclose the material may comprise a lithium based material, thereby capable of reacting with carbon dioxide to form a lithium carbonate (column 3, lines 32-36). Although Chang et al. do not specifically state the specific gas comprises carbon dioxide, the apparatus of Chang et al. is capable of utilizing a mixed gas comprising carbon dioxide. In any event, the modified apparatus of Chang et al. meets the claim since the specific gas is merely intended use and therefore not an element of the apparatus.

With respect to claim 15, no further structural limitations are recited since temperature is not an element of the apparatus, and therefore the apparatus of Chang et al. meets the claim.

With respect to claim 16, Chang et al. disclose a gas separator (FIG. 1, 2) comprising a rotating body **10** and a drive means (inherent, as illustrated by directional arrows). Chang et al. further disclose flow path means **22a**, **22b** for feeding a temperature adjusting fluid for exclusively changing the temperature of a gas absorption/releasing material (column 3, lines 32-36; column 4, lines 42-35) depending on a rotational position of the body and for causing absorption and release of the specific gas in accordance with the rotational position of the body. Although Chang et al. are silent as to the body **10** being housed in an outer casing, it would have been obvious for one of ordinary skill in the art at the time the invention was made to provide a casing for the apparatus since the use of casings for housing rotary absorption apparatuses is conventionally known in the art, as evidenced by Panzica et al. (casing walls **36** are provided in order to direct air into the absorbing elements; column 3, lines 56-61; FIG. 1).

With respect to claim 17, Chang et al. further disclose the material may comprise a lithium based material, thereby capable of reacting with carbon dioxide to form a lithium carbonate (column 3, lines 32-36). Although Chang et al. do not specifically state the specific gas comprises carbon dioxide, the apparatus of Chang et al. is capable of utilizing a mixed gas comprising carbon dioxide. In any event, the modified apparatus of Chang et al. meets the claim since the specific gas is merely intended use and therefore not an element of the apparatus.

With respect to claim 18, no further structural limitations are recited since temperature is not an element of the apparatus, and therefore the apparatus of Chang et al. meets the claim.

With respect to claim 19, Chang et al. disclose a gas separator (FIG. 1, 2) comprising a rotating body **10** and a drive means (inherent, as illustrated by directional arrows). Chang et al. further disclose a gas absorption/releasing material (column 3, lines 32-36; column 4, lines 42-

35) provided in the hollow portions of the blocks; a hollow static portion (defined by inner wall **12**) disposed at a central portion of the body **10** and having an inner hollow portion which is divided by a separation plate **20** thereby to form two introducing path structures **22a**, **22b** through which temperature adjusting fluids pass; and first (left side of body **10**, FIG. 2) and second (right side of body **10**, FIG. 2) independent gas flow path structures, the first gas flow path extending between a supply port (open top surface, via which **A2** enters) and a discharge port (open bottom surface, via which **A3** exits) and passing through the hollow portions of the blocks of the rotating body, the second gas flow path having a recovery port (open bottom surface, via which **A7** exits) through which the specific gas is released. Although Chang et al. are silent as to the rotating body **10** being housed in an outer casing, it would have been obvious for one of ordinary skill in the art at the time the invention was made to provide a casing for the apparatus since the use of casings for housing rotary absorption apparatuses is conventionally known in the art, as evidenced by Panzica et al. (casing walls **36** are provided in order to direct air into the absorbing elements; column 3, lines 56-61; FIG. 1).

With respect to claim 21, Chang further disclose the second gas flow path structure (right side of body **10**; FIG. 2) is such that the recovery port structure (bottom surface, via which **A7** exits) and an introduction port for a recycle stream **A6** (top surface) fluidly communicates therewith. Although Chang does not specify whether recycle stream **A6** can be omitted, such that the recovery port structure becomes the only port structure in fluid communication therewith, it would have been obvious for one of ordinary skill in the art at the time the invention was made to omit such stream, since it is conventionally known in the art that recycle streams are often employed as optional streams used for energy and mass conservation.

With respect to claim 22, Chang further disclose the first gas flow path structure (left side of body **10**) and the second temperature adjusting fluid flow path structure **22a** are coextensive. Chang further discloses a heating means **24** (column 3, lines 19-23) may be disposed in either one of the chambers **22a** and **22b**, depending on the intended use of the apparatus (in FIG. 1, **24** is shown as being disposed in the first temperature adjusting fluid flow path structure **22b**) such that the mixed gas may be preheated to function as the second temperature adjusting fluid.

Response to Arguments

6. Applicant's arguments filed on October 31, 2002 have been fully considered but they are not persuasive. In particular, Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

With respect to claims 1-7, applicant argues that the references "... neither have nor suggest a structure which as 1) first and second independent gas flow path structures and 2) first and second temperature adjusting fluid flow path structures." (page 9, paragraphs 1-3). However, the Examiner asserts that the language of the claims is not commensurate with applicant's arguments since it is unclear as to the relationship between elements 1) and 2), and therefore the "the first and second gas flow path structures" and "the first and second temperature adjusting fluid flow path structures" structurally read on the apparatus Panzica et al., as discussed above.

With respect to claims 12-13, applicant argues that none of the "references disclose a temperature control fluid passage structure in the housing in addition to first and second gas flow paths." (page 9, paragraphs 5-6). However, the Examiner asserts that the language of the claims

is not commensurate with applicant's arguments, since it is unclear as to the structural relationship of the temperature control fluid passage structure to the first and second gas flow paths, and therefore claim structurally reads on the apparatus Panzica et al., as discussed above.

With respect to claims 16 and 18, applicant argues that none of the references disclose a flow path means within the casing for feeding a temperature adjusting fluid for exclusively changing the temperature of the gas adsorption/releasing material (page 10, paragraph 1). However, the Examiner asserts that the language of the claims is not commensurate with applicant's arguments, and that a "flow path means" capable of performing the functions as claimed structurally reads on the apparatus Panzica et al., as discussed above.

With respect to claim 19, applicant argues that the structure of the hollow static portion is not disclosed in Panzica et al. (page 10, paragraphs 2-3). However, the Examiner asserts that the language of the claims is not commensurate with applicants arguments, and that the "hollow static portion having an inner hollow portion which is divided by a separation plate to form two introducing path structures" (lines 10-12) structurally reads on the apparatus Panzica et al., as discussed above.

7. Applicant's arguments with respect to claims 10-11, 14-15, 17 and 20 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Applicant's Information Disclosure Form 1449 (paper #6) is resubmitted with reference A5 initialed, previously considered but inadvertently missed.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

* * *

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A. Leung whose telephone number is 703-305-4951. The examiner can normally be reached on 8:30 am - 5:30 pm M-F, every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn A. Caldarola can be reached on 703-308-6824. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Jennifer A. Leung
January 4, 2003 JAL

Hien Tran

HIEN TRAN
PRIMARY EXAMINER